

REMARKS

Claims 1, 3-4, and 6-10 are pending in this application. By the Office Action, claims 9-10 are withdrawn from consideration; and claims 1 and 3-8 are rejected under 35 U.S.C. §103(a). By this Amendment, claims 1 and 9 are amended and claim 5 is canceled. Support for the amendments to claims 1 and 9 can be found in the specification as filed, such as at claim 5 and page 14, line 34 to page 15, line 10. No new matter is added.

Entry of this Amendment is proper under 37 C.F.R. §1.116 because the Amendment places the application in condition for allowance (for the reasons discussed herein) or places the application into better form for Appeal should an Appeal be necessary. The Amendment does not present any additional claims without canceling a corresponding number of finally rejected claims, does not raise the issue of new matter, and does not raise any new issues requiring additional search and/or consideration since the Amendment is directed to subject matter previously considered during prosecution. Furthermore, the amendments are necessary and were not earlier presented because they are in response to issues raised in the Final Rejection. Applicants respectfully request entry of the Amendment.

I. Rejections Under §103(a)

A. Ueda and Hong

Claims 1 and 3-8 are rejected under 35 U.S.C. §103(a) over Ueda in view of Hong. The Office Action argues that Ueda discloses all the limitations of the claimed invention except the use of Cu-Co alloy for the blackened shielding layer, but that Hong overcomes this deficiency. Applicant respectfully traverses the rejection.

Independent claim 1 is directed to an electromagnetic shielding sheet comprising: a transparent base; a mesh metal layer having openings and formed on one of the surfaces of the base; a blackened layer formed on one of the surfaces of the metal layer; and a density-intensifying layer formed on the blackened layer, wherein the blackened layer is formed of

Cu-Co alloy particles adhering to the metal layer, the density-intensifying layer is a chromated layer formed by a chromate treatment and so that the Cu-Co alloy particles are prevented from coming off from the mesh metal layer by the chromated layer. Such an electromagnetic shielding sheet is not taught or suggested by the cited references.

According to the claimed invention, the density-intensifying layer is a chromated layer formed on the blackened layer of Cu-Co particles adhering to the mesh metal layer, by a chromated treatment. Also, the Cu-Co alloy particles in the blackened layer are prevented from coming off from the mesh metal layer by the chromated layer. As a result of these features, because the Cu-Co alloy particles in the blackened layer are prevented from coming off from the mesh layer, the Cu-Co alloy particles can be maintained and perform securely a blackening function. As a result, the chromated layer can function not only as a density-intensifying layer, but also as a protecting layer for protecting the Cu-Co alloy particles. At least these two features of the claimed invention are not taught or suggested by Ueda and Hong.

Ueda discloses an electromagnetic shield plate comprising a geometric pattern having a line width of 10 to 80 microns and a line interval of 50 to 250 mesh on a surface of a transparent substrate. Abstract.

Although Ueda discloses an electromagnetic shield plate, Ueda does not teach or suggest that any density-intensifying layer is formed on the blackened layer, or that the density-intensifying layer is a chromated layer formed by a chromate treatment. Instead, Ueda discloses that "[w]hen forming the uppermost layer as a black colored layer, black nickel plating, chromate plating, or black ternary alloy plating using tin, nickel, and copper, or black ternary alloy plating using tin, nickel, and molybdenum, should be applied for the formation of the black colored layer." Paragraph [0034]. Furthermore, in Ueda, the chromate

plating is used in forming the upper layer of the black colored layer, not for forming the upper layer of the density-intensifying layer.

Thus, it is apparent from Ueda that the uppermost layer is a black colored layer, not a density-intensifying layer formed on a blackened layer, as claimed. Ueda does not teach or suggest modifying any of its disclosure so as to arrive at the claimed invention.

Hong does not overcome the deficiencies of Ueda. The Office Action cites Hong for its disclosure of Cu-Co alloy for use in a blackened shielding layer, and asserts that it would have been obvious to combine Ueda and Hong. Applicant disagrees.

Hong is directed to a ceramic composition for absorbing electromagnetic waves, comprising specified amounts of Fe_2O_3 , Al_2O_3 , Zn, Cr, Cu, Mn, and Co. Abstract. However, while Hong discloses a composition of a raw powder comprising Cu powder and Co powder, Hong does not teach or suggest that the blackened layer of Ueda should be formed of Cu-Co alloy particles adhering to the metal layer, as claimed.

Furthermore, in Hong, the raw powder comprising Cu powder and Co powder is used for absorbing electromagnetic waves, and therefore the raw powder comprising Cu powder and Co powder is completely unrelated to a blackened layer formed on a mesh metal layer, as claimed. That is, the raw powder comprising Cu powder and Co powder of Hong at most corresponds only to the mesh metal layer of the claimed invention, but cannot correspond to the claimed blackened layer. Nowhere does either Ueda or Hong teach or suggest that Ueda's structure could or should be modified to utilize the raw powder comprising Cu powder and Co powder as part of a blackened layer.

Accordingly, any combination of Ueda and Hong would not have rendered obvious the claimed invention. The claimed invention is thus patentable over the cited references. Reconsideration and withdrawal of the rejection are respectfully requested.

B. Ueda, Miyake, and Kadokura

Claims 1 and 4-8 are rejected under 35 U.S.C. §103(a) over Ueda in view of Miyake. Claim 3 is rejected under 35 U.S.C. §103(a) over Ueda and Miyake, and further in view of Kadokura. The Office Action argues that Ueda discloses all the limitations of the claimed invention except the use of Cu-Co alloy for the blackened shielding layer and the size of the particle for use in the blackened layer, but argues that Miyake and Kadokura overcome these deficiencies. Applicant respectfully traverses these rejections.

The claimed invention and Ueda are discussed in detail above. As described, Ueda at least fails to teach or suggest that any density-intensifying layer is formed on the blackened layer, or that the density-intensifying layer is a chromated layer formed by a chromate treatment. In Ueda, the uppermost layer is a black colored layer, not a density-intensifying layer formed on a blackened layer, as claimed. Ueda does not teach or suggest modifying any of its disclosure so as to arrive at the claimed invention. Miyake and Kadokura fail to overcome these deficiencies of Ueda.

Miyake is cited for the disclosure of Cu-Co alloy for use in a blackened shielding layer. Miyake only discloses that Cu-Co alloy can be used as a material for absorbing electromagnetic waves. However, Miyake does not teach or suggest using any Cu-Co alloy powder that is adhered to a mesh metal layer as a blackened layer. That is, the Cu-Co powder of Miyake at most corresponds only to the mesh metal layer of the claimed invention, but cannot correspond to the claimed blackened layer. Nowhere does either Ueda or Miyake teach or suggest that Ueda's structure could or should be modified to utilize the Cu-Co powder of Miyake as part of a blackened layer.

Kadokura also fails to overcome these deficiencies of Ueda and Miyake. Kadokura is cited only for its disclosure of size of the particle for use in the blackened layer. However, regardless of its actual disclosure, Kadokura also fails to teach or suggest that Ueda's structure

could or should be modified to utilize the Cu-Co powder of Miyake as part of a blackened layer, as claimed.

Accordingly, any combination of Ueda, Miyake, and Kadokura would not have rendered obvious the claimed invention. The claimed invention is thus patentable over the cited references. Reconsideration and withdrawal of the rejections are respectfully requested.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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